

MIDSTATE AMATEUR RADIO CLUB
MARC
"Ham Radio News from Johnson County, Indiana"

1997	1996	1995	1994	1993	1992
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719	718				

SPARK GAP

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Membership Information

The Mid-State Amateur Radio Club is a Franklin based organization open to all amateur radio operators in central Indiana.

The MARC meets the third Saturday of each month in the training room of the Johnson County Emergency Operations Center at 1100 Hospital Road in Franklin, In.

The MARC operates a 2-meter repeater at 146.835 MHz. Each club member has free access to the repeater and autopatch.

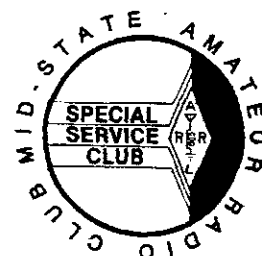
Annual dues are \$18.00. VE Testing follows each meeting from March through November.

Submit stories to the editor on disk or via e-mail by the 3rd of each month.

Send change-of-address information and membership applications to the club treasurer @ MARC President, P.O. Box 836, Franklin, In. 46131.

The Spark Gap is published monthly by the Mid-State ARC.

MARC



CLUB OFFICERS

President :

Dennis Parton, KB9HPQ

H. 535-5867

Vice President:

George Weimer, KG9HU

H. 882-5081

Secretary:

Marilyn Parton, N9TUK

H. 535-9910

Treasurer/ARES:

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H. 738-4575

RACES Director:

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H. 889-8962

Repeater Trustee:

Dave Julian, WB9YIG

H. 887-9504

Activities:

Jack Parker, NT9J

H. 881-0817

VE Team Coordinator

Dave Wendt, KA9OOH

H. 974-1488

Club Meeting

Saturday February 15th

8 a.m.

Guest speaker, Ed Woods, WD9DVA

Topic: MARS and Beyond

No VE Testing



By Mike Rosemark, KA9VMR

NWS Meteorologist

How To Tilt A Thunderstorm

Another severe weather season is just around the corner for Indiana. Although this area can experience severe thunderstorms and tornadoes in every month of the year, probabilities for this type of weather start to go up dramatically in March, peaking out in April, May, and June. Severe thunderstorms are capable of producing large hail, strong surface winds, flash floods, and tornadoes. Like their non-severe cousin, they form as moist air is forced to rise into an unstable environment. Often present in the atmosphere when severe thunderstorm potential is high is vertical wind shear.

Vertical wind shear means that the speed and direction of the wind changes as you go up through the atmosphere. In an area of favorable vertical wind shear, instability will be increased and more importantly, the thunderstorm updraft will tilt. This is important because, as is the case of the common non-severe thunderstorm, when precipitation become too heavy to be supported by the updraft, it falls down through the updraft weakening it. When vertical wind shear causes the updraft to tilt, it can become separated from the downdraft of a storm.

If this happens, downdrafts caused by falling precipitation do not interfere with the updraft. Therefore, the updraft remains strong and does not dissipate as long as sufficient moisture and instability are present. Because the updrafts can flow unabated in a tilted storm, they can reach speeds in excess of 50 knots. These speeds are necessary for large severe



thunderstorms which often exceed 50,000 feet in altitude. The strong updrafts will allow hailstones to remain aloft until they reach large size. Because of this, hail size is a good way of indirectly measuring the relative intensity of the thunderstorm updraft.

In the downdraft region of the severe thunderstorm, air which is cooled by evaporation of some of the precipitation and by sucking in cooler air surrounding the storm will accelerate in speed as it moves down toward the surface. When storms grow to great height, these downdrafts have sufficient distance to accelerate

to speeds that can cause damage when striking the ground. There is no mixing of the updraft to slow these winds as is the case with thunderstorms in a non-favorably sheared environment. Upon hitting the ground, downdrafts spread out and move in all directions. The boundary between the warm air at



the surface and the colder air brought down by the thunderstorm downdraft is called the gust front. As the name implies, it's passage is often marked by a gust of wind. Lower cloud bases called shelf clouds frequently form in the vicinity of the gust front when wind speeds are strong.

Occasionally roll clouds, which appear to rotate along a horizontal axis, appear near the gust front. Neither of these cloud features should be confused with a wall cloud which would be located in the updraft portion of the thunderstorm. Severe thunderstorms can produce small areas of very high speed winds within the downdraft. These areas, known as microbursts, can contain winds in excess of 100 mph. Considerable damage is possible from these events.

Old wisdom revisited

Give a man a fish,
and he may eat it at his lunch break.
Teach a man to fish,
and he may not go to work at all.

---anonymous

Remember When?

From Midstate ARC News

October 1986

Dave KA9OOH, Editor

-Welcome to the new look for the Midstate ARC News. As new editor, I intend to put out a lively and interesting rag (but no promises).

-I'm sorry there wasn't time to get this mailed before the October meeting, but we forgot about there being no mail delivery on Columbus Day.

-The logo at the top was done on a Radio Shack Color computer, using a program called CocoMax II (no relation to Max Headroom!)

-THANKS to the House of Franklin for installing a door in the back dining room. It makes it easier to hear (during the meeting).

-New Officers for 86-87 Joan Kemp, N9DON President, Jack Parker, N9EXK, Vice President, Tom Carroll, N9AZD Secretary-Treasurer and Larry Kemp, N9DLN, Repeater Trustee.

-N9AZD reports that he has a good supply of 610's on hand for the coming upgrades. (I may need some of those for the Red Cross Novice class, Tom!)

-NEW MEMBERS--KA9CQC Dave Snyder (August), KB9K Bill Fisher (Sept) and KA9VRB Fred Creekmore in July. This brings total membership to 44.

(Excerpts from October 1986 club newsletter, Dave Wendt editor)

HAPPY Birthday

David Wendt	KA9OOH	2/3
Joan Kemp	N9DON	2/11
Bob DeSpain	N9DE	2/13
Fred Bennett	N9TA	2/18
Homer Keesling	WB9OZZ	2/19
James Dezarn	KB9NSX	2/19
Ralph Talbott	N9RNI	2/19
Bob LaGrange	N9SIU	2/21
Christopher Vail	N9TFC	2/27

Norm Beaty, WD9BGM, SK

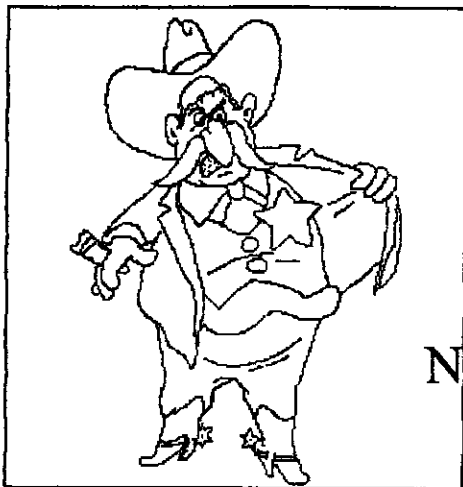
The Amateur Radio and broadcasting communities in Indiana, lost a good friend last month. Norm Beaty, known to his ham radio friends as WD9BGM, died from medical complications resulting from serious injuries suffered in an automobile accident last October.

The accident occurred on Interstate 70 near his home in Greenfield, Indiana. Norm was the Chief engineer for WIBC-AM radio. He was known around the state for his efforts as Broadcast Frequency Coordinator for the Indiana Society of Broadcast Engineers.

Norm helped to develop and implement the new Emergency Notification System used at radio and TV stations around the state. Norm is survived by his wife Margo and two daughters, Amber and Crystal. On January 22, 1997, at the age of 45, Ralph Norman Beaty, WD9BGM, became a Silent Key.

DUES Notice

Have you paid your 1997 Dues yet? Just a friendly reminder that the **annual dues** are payable at the February 15th meeting or via snail mail to: **MARC Treasurer P.O. Box 836, Franklin, In. 46131**. If you have not paid your Dues by the end of February 1997, this will be the last issue of Spark Gap you will receive. An \$18.00 activation and processing fee will be charged to any old or new members establishing membership following the February deadline. (sounds like a utility company, doesn't it?) Actually, your total cost is **still only \$18.00**. We appreciate your support and look forward to another exciting year of Amateur Radio activities in MARC.



Ah say,
It's time
for the
Novice/Tech
Class

NOVICE/TECH CLASSES

begin March 3rd
7 PM EOC

Contact Dave Wendt
Sign up-call 974-1488

Sponsored by Mid-State ARC

New ham freq's

The FCC has amended Part 15 of its rules to make available 300 MHz of spectrum in the 5-GHz range--including part of secondary Amateur Radio allocations in that region--for use by Unlicensed National Information Infrastructure (U-NII) devices (formerly referred to as NII/SUPERNet devices). The FCC made available 5.15 to 5.35 GHz and 5.725 to 5.825 GHz. Part 15 requires that unlicensed operations not interfere with other services. The U-NII devices will provide short-range, high-speed wireless digital communications on an unlicensed basis. The 5.650 to 5.925-GHz band is allocated on a secondary basis to the amateur service; additionally, the 5.65 to 5.67-GHz and 5.83 to 5.85-GHz subbands are allocated to the amateur-satellite service on a secondary basis. The original FCC U-NII proposal included 5.725 to 5.875 GHz, but the plan adopted this month excludes 50 MHz of this, including the Amateur Radio-satellite

downlink at 5.83 to 5.85 GHz. The FCC said it anticipates that U-NII devices will support the creation of new wireless local area networks (LANs) and provide wireless access to the National Information Infrastructure (NII). That's the name the FCC has given the "group of networks, including the public switched telecommunications network, radio and television networks, private communications networks, and other networks not yet built" to serve US communication needs.

The FCC said it was "adopting the minimum technical rules necessary to prevent interference to other services and to ensure that the spectrum is used efficiently" in order to permit "significant flexibility in the design and operation of these devices." Although it initially proposed a listen-before-talk protocol, the FCC deleted this requirement in its final Report and Order, concluding that requiring such "spectrum etiquette" could delay deployment of U-NII devices and hinder innovation. The Commission also declined to adopt a channelization plan or a minimum modulation efficiency requirement. Incumbent users of the 5.725 to 5.825-GHz band either opposed allowing U-NII operation because of interference concerns or urged that sharing studies be completed before that band was made available to U-NII devices.

In its comments on the plan, the ARRL argued against setting up an unlicensed service. The League asserted that longer-range community networks are not consistent with the typical low-power operations authorized by Part 15. Although the ARRL opposed the operation of U-NII devices in the 5.725 to 5.825-GHz band, it stated that if a 100-mW EIRP limit and a power spectral density (PSD) limitation of 0.03 mW in any 3-kHz bandwidth were adopted, then U-NII devices should be able to share this band with incumbent operations.

The Commission decided to increase the maximum peak power limit to 50 mW peak transmitter output power with up to 6 dBi antenna gain (which equates to 200 mW EIRP) in the 5.15 to 5.25-GHz band; 250 mW peak transmitter output power with up to 6 dBi antenna gain (which equates to 1 W EIRP) in the 5.25 to 5.35-GHz band; and 1 W peak transmitter output power with up to 6 dBi antenna gain (which equates to 4 W EIRP) permitted in the 5.725 to 5.825-GHz band. Further, the FCC adopted a PSD requirement for U-NII devices that would require that the maximum power be spread across a bandwidth of at least 20 MHz.

The FCC said it believes that the new rules "will foster the development of a broad range of new devices and service offerings that will stimulate economic development and the growth of new industries." --FCC-- ARRL Bulletin

Man from MARS

Advanced technology and fewer military bases around the world are taking their toll on the MARS program. According to Ed Woods, WD9DVA, the Military Amateur Radio Service (MARS) has seen a dramatic drop in the number of messages handled since the government began closing military installations around the world.

Ed Woods was first licensed in 1950 while serving in the Air Force. He has been active in the MARS program for the past fifteen years. Ed says MARS members normally are kept busy passing radio traffic and making phone patches for active military personnel around the world. But, he says, new satellite and cel phone technology has taken much of the personal message traffic out of the hands of Amateur Radio operators. As a result, some of the special HF frequencies used by MARS operators have been auctioned off to commercial interests. Ed will talk about the future of MARS and the growing threat of losing valuable Amateur Radio frequencies at the February 15th meeting.



Touching the past. Club members inspect some of the antique amateur radios displayed by Roger Lowary, W9BZ. Roger collects and restores classic amateur and AM radios. Pictured (L-R), Bob LeGrange, N9SIU; Bill Brinkmann, KB9ZMU; and Dennis Parton, KB9HPQ. Photo by NT9J.

Public Service



Members of the Monroe County (Michigan) ARES were activated late on the afternoon of January 9 in response to the crash of a Comair commuter aircraft near Ida, Michigan. The flight (Flight 3272) was en route to Detroit from Cincinnati, Ohio, and carried 26 passengers and a crew of three. All aboard lost their lives. A communication center was activated at the Monroe County Chapter of the American Red Cross, and Amateur Radio units were initially dispatched to the crash scene and the field command post at the Raisinville Township Hall. Communication was provided to the Red Cross, which assisted Emergency Management and Human Services Personnel. In all, 26 amateurs were involved with the emergency operation as local officials and National Transportation Safety Board conducted their investigation. Blowing snow and 30-degrees-below-zero wind chills hampered efforts at the crash scene, which occurred on farmland about 150 yards from the town hall. The Monroe County EC is Mike "armol, N8KUF. --Dale Williams, WA8EFK

Navy studies SAREX QSO's

Ham-Astronaut Jerry Linenger, KC5HBR, has become the fourth American to occupy a position on the Russian Space Station Mir, following the docking of Atlantis to the Russian space station late Tuesday. Linenger officially traded places with fellow ham-Astronaut John Blaha, KC5TZQ, when their form-fitted Soyuz seat liners were swapped in the small spacecraft that is used for return to Earth. "We're truly in the space station business," said Blaha, who completed 118 days as a Mir crew member. Linenger will stay aboard Mir until May.

During his stay aboard Mir, permission was obtained from the FCC to permit Blaha to engage in third-party communication with unlicensed individuals on Earth. This led to a series of MIREX contacts with several schools. The last contact, on Saturday, January 11, was with pupils at Emerson Elementary School in Snohomish, Washington. The school's technical curriculum specialist Gary Evans e-mailed an enthusiastic note of gratitude to AMSAT's Vice President for Manned Space Programs Frank Bauer, KA3HDO. "It was tremendous! I wish you could have seen for yourself the faces of both the students and their parents as our contact with Mir evolved." The Naval Oceanographic Office assisted with the QSO. They are now interested in doing a program similar to SAREX. The Navy wants to use Amateur Radio to allow students to talk to Naval Oceanographic Office employees who are out on exciting expeditions. --NASA/SAREX Working Group --ARRL Bulletin

Food for thought

- An Easterner who walked into a western saloon was amazed to see a dog playing poker with three men. "Can that dog really read cards?" the Easterner asked. "Yeah, but he ain't much of a player, said one of the men. "Whenever he gets a good hand, he wags his tail."
- Most expressways have three lanes: the left lane, the right lane, and the one you're trapped in when you see your exit.
- Every parent believes in heredity until the children start acting goofy.

from the April '94 Westchester Emergency Communications Assn. (North Tarrytown, N.Y.) "Wecagram", Paul-WB2VUK, Editor ARNS

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Crossroads Broadcast BBS

Charlie Sears, N9MEW - Sysop

535-1643

FOR SALE:

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\$350 negotiable, Call Tom Scott 783-5819

Tubes, parts, transformers, etc.

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